

ABSTRACT

A device is provided having a cathode capable of catalytically reducing oxygen, an anode capable of catalytically oxidizing hydrogen, and an electrolyte in contact with both the anode and cathode. The cathode and/or anode contain transition-metal phosphates with the formula $M^1\text{-}M^2P_xO_y \cdot zH_2O$, where M^1 is a platinum group metal and M^2 is a transition metal.